



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
|-----------------|-------------|----------------------|---------------------|------------------|

10/068,076

02/06/2002

Marcus D. McHugh

89.0486

7388

35204

7590

08/23/2004

SCHLUMBERGER RESERVOIR COMPLETIONS

14910 AIRLINE ROAD

P.O. BOX 1590

ROSHARON, TX 77583-1590

EXAMINER

ZARROLI, MICHAEL C

ART UNIT

PAPER NUMBER

2839

DATE MAILED: 08/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                        |                     |  |
|------------------------------|------------------------|---------------------|--|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |  |
|                              | 10/068,076             | MCHUGH ET AL.       |  |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |  |
|                              | Michael C. Zarroli     | 2839                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 2/6/02.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 16-18 is/are allowed.
- 6) ☒ Claim(s) 1,2,5,8-12,14,15,19-26,29 and 30 is/are rejected.
- 7) ☒ Claim(s) 3-4,6-7,13,27-28 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 February 2002 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### DETAILED ACTION

*1. The previous office action has left the office. What follows is a second action non-final rejection due to new art.*

#### *Drawings*

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the sliding contact comprised of a **plurality** of extensions must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement-drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. The replacement

sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the examiner does not accept the changes, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

3. Claim 29 objected to because of the following informalities: Is there an antecedent problem with "**an** internal power cable" in the next to last line? Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claims 21-24 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 21 the examiner does not understand what “an extensible electrical connector” means. What is the connector extensible from? Until the applicant clears this up, the examiner will interpret this phrase to mean that the connector can be extended in and out of the intermediate tubing.

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

7. Claim 1 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sharp et al.

Sharp discloses a tubing system for use in a subterranean environment (claim 1 preamble), comprising: an upper tubing section (fig. 4) having an upper power cable segment therein; a lower tubing section (figures 6) having a lower power cable segment therein; and an intermediate tubing section (10) having an electrical connector (21) that is axially expandable therein (fig. 3 at 62), wherein the upper

and the lower tubing sections are coupled to generally opposite ends (12, 13) of the intermediate tubing section and the electrical connector is electrically coupled to the upper and lower power cable segments.

8. Claims 8, 10-12 and, 14-15 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sharp et al.

Sharp discloses a tubing splice system (figures 1 & 2), comprising: an intermediate tubing section (10) coupled to a pair of adjacent tubing sections (10A & fig. 6) by a pair of mechanical connectors (12, 13) each having an outside diameter that does not substantially exceed the diameter of each adjacent tubing section (figures 2 & 6); and a power cable (col. 4 lines 25-27) extending through the pair of tubing sections, the power cable being spliced by an electrical connector (internal connectors at fig. 3) disposed within the intermediate tubing section between the pair of mechanical connectors (figures 5 & 6).

Regarding claim 10 Sharp discloses that the pair of adjacent tubing sections and the intermediate tubing section have common diameters (figures 1, 2 & 5).

Regarding claim 11 Sharp discloses that the electrical connector is expandable within the intermediate tubing (fig. 3 at 62).

Regarding claim 12 Sharp discloses that each mechanical connector of the pair of mechanical connectors has a diameter no greater than the diameter of the pair of adjacent tubing sections (figures 2 & 6).

Regarding claim 14 Sharp discloses that the electrical connector comprises a sliding contact to permit axial elongation and contraction (top of fig. 3).

Regarding claim 15 Sharp discloses that an electric submersible pumping system is coupled to the power cable and to one of the pair of tubing sections (title & col. 1 lines 10-14).

9. Claims 8 and 10 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Conner et al.

Conner discloses a tubing splice system (fig. 1), comprising: an intermediate tubing section (38) coupled to a pair of adjacent tubing sections (36, 14) by a pair of mechanical connectors (45, 47) each having an outside diameter that does not substantially exceed the diameter of each adjacent tubing section (figures 1 & 3); and a power cable (18, 20) extending through the pair of tubing sections, the power cable being spliced by an electrical connector (internal connectors at fig. 3) disposed within the intermediate tubing section between the pair of mechanical connectors.

Regarding claim 10 Conner discloses that the pair of adjacent tubing sections and the intermediate tubing section have common diameters (fig. 1).

10. Claims 19-20 and, 25-26 rejected under 35 U.S.C. 102(b) as being clearly anticipated by Reed.

Reed discloses a method for splicing tubing having an internal power cable for use in providing power to an electric submersible pumping system (col. 4 lines 45-47), comprising: coupling an intermediate tubing section (27) between a pair of tubing sections of equal diameter (figures 7 & 10) to the intermediate tubing section (fig.4) via a pair of mechanical connectors (fig. 9 various components); and splicing an internal power cable within the intermediate tubing section (fig. 5).

Regarding claim 20 Reed discloses that the splicing upper and lower segments of the power cable (fig. 5 73 & 46) to an electrical connector (42) disposed between the pair of mechanical connectors.

Regarding claims 25-26 Reed discloses connecting an electrical submersible pumping system via the internal power cable (abstract 1<sup>st</sup> sentence).

11. Claims 29-30 rejected under 35 U.S.C. 102(e) as being anticipated by Halpert et al.

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed



but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Halpert discloses a system for splicing tubing (abstract first sentence) having an internal power cable (34) comprising: means for coupling (fig. 3) an intermediate coiled tubing section (44) between a pair of coiled tubing sections (fig. 4) via a pair of mechanical connectors (fig. 2 at 54, 58, 68, 60 & 64); and means for splicing **the** internal power cable within the intermediate coiled tubing section (fig. 4). Wherein the means for splicing comprises an electrical connector and a pair of electrical splices (figures 6 & 8) disposed between the pair of mechanical connectors. **The preamble statement that indicates what the splicing system is to be used for is not given patentable weight because it is intended use language.**

### ***Claim Rejections - 35 USC § 103***

12. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al.

Sharp discloses upper and lower tubing sections but not that these sections are comprised of coiled tubing.

In the background of the invention second paragraph the applicant discusses how common coiled tubing is in this art.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the upper and lower tubing sections in Sharp et al by making these sections coiled tubing. The motivation for this change could be to make the arrangement of Sharp more flexible and easier to utilize.

Regarding claim 5, which depends from claim 2, Sharp discloses that the electrical connector comprises a sliding contact to permit axial elongation and contraction (fig. 3 at 62).

15. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Sharp et al.

Sharp discloses upper and lower tubing sections but not that these sections are comprised of coiled tubing.

In the background of the invention second paragraph the applicant discusses how common coiled tubing is in this art.

At the time the invention was made it would have been obvious to one of ordinary skill in the art to modify the upper and lower tubing sections in Sharp et al by making these sections coiled tubing. The motivation for this change could be to make the arrangement of Sharp more flexible and easier to utilize.

***Allowable Subject Matter***

16. Claims 16-18 are allowed over the prior art of record.

17. Claims 3-4, 6-7, 13 and, 27-28 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

18. Claims 21-24 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

19. The following is a statement of reasons for the indication of allowable subject matter:

The combination in claim 16 specifically, the power cable connector fitting into coiled tubing and the conductive extension that slides into a conductive receptacle of the connector.

The examiner will not repeat what is allowable in dependent claims with only one limitation.

Regarding claim 6 the plurality of extensions and receptacles.

Regarding claim 21 (as best understood) the electrical connector that can extend into or out of the tubing.

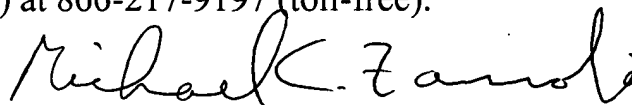
### ***Conclusion***

20. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rayssiguier et al teaches a splicing connector for a power cable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Zarroli whose telephone number is 571-272-2101. The examiner can normally be reached on 7:30 to 3:30 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, T.C. Patel can be reached on (571) 272-2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael C. Zarroli  
Primary Examiner  
Art Unit 2839

MCZ  
MCZ